MIH Series 5X7 Ceramic SMD Oscillator

o **Low Profile SMD Package**

o **Hermetically Sealed**

o **RoHS Compliant**

o **Wide Frequency Range**

Frequency Range	1.500MHZ to 156.250MHZ			
Temperature Stability*	(See Part Number Guide for Options)			
Operating Temperature Range	(See Part Number Guide for Options)			
Storage Temperature Range	-55°C to +125°C			
Aging (+25°C ±3°C)	±5ppm for first year			
Waveform	HCMOS			
Supply Voltage ±5% (Vdd)	+1.80 VDC	+2.50 VDC	+3.30 VDC	+5.00 VDC
Supply Current	15mA	40mA	40mA	70mA
Load	15pF	15pF	10 TTL Gates or 30pF	10 TTL Gates or 50pF
Logic "0"	10% Vdd max			
Logic "1"	90% Vdd min			
Rise/Fall Time (10% to 90% of Supply Voltage)	4nSec			
Symmetry (50% of waveform)	40%/60% (45%/55% optional)			
Start-up Time	10mSec max			
Jitter (RMS)	Less than 1 pSec			
Tri-State Operation	Vih = 70% of Vdd min to Enable Output Vil = 30% max or grounded to Disable Output (High Impedance)			
Standby Current Consumption	10uA			
* Inclusive of Temperature., Load and Voltage				

Mechanical & Environmental Detail

Shock	MIL-STD-883, Method 2002 Cond B
Solderability	MIL-STD-883, Method 2003
Solvent Resistance	MIL-STD-202, Method 215
Vibration	MIL-STD-883, Method 2007, Cond A
Gross Leak Test	MIL-STD-883, Method 1014, Cond C
Fine Leak Test	MIL-STD-883, Method 1014, Cond A2
MSL	Level 1 per IPC/JEDEC J-STD 20

Marking Detail

Line 1 = MXXXXX		
M	=	MMD
XXXXX	=	Frequency in MHZ
Line 2 = SYYWWL		
S	=	Internal Code
YYWW	=	4 Digit Date Code (Year / Week)
L	=	Denotes RoHS Compliant
Line 3 = XXXXX		
Internal use only		
May vary with lots		
Black dot to denote Pin 1		

**MMD MONITOR/QUARTZEK – An ILSI Company,**
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Revision:	07/24/13 U

Part Number Guide

MI H ☐ ☐ ☐ ☐ — Frequency — ☐

5 X 7 Ceramic SMD

Output
H = HCMOS

Supply Voltage
1 = +1.8 VDC
2 = +2.5 VDC
3 = +3.3 VDC
5 = +5.0 VDC

Frequency Stability
010 = ±10 ppm*
015 = ±15 ppm
020 = ±20 ppm
025 = ±25 ppm
050 = ±50 ppm
100 = ±100 ppm

Operating Temperature
Blank = 0°C to +70°C
27 = -20°C to +70°C
48 = -40°C to +85°C

Symmetry
Blank = 40/60%
A = 45/55%

Packaging
Blank = Bulk
T = Tape and Reel

Pin 1 Connection
Blank = N/C
H = Tri-state
S = Stand-by
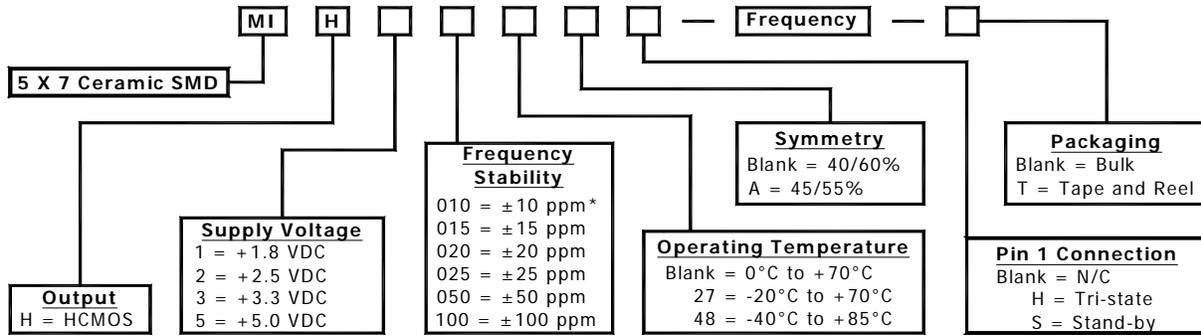
Please Consult with MMD Sales Department for any other Parameters or Options
* Not available in +1.8 VDC and +2.5 VDC

Mechanical Details

7.20 [.283] MAX
5.20 [.205] MAX
1.70 [.067] MAX
5.08 [.200]
2.60 [.102]
1.30 [.051]
1.40 [.055]
2.88 [.113]
2.00 [.079]
2.20 [.087]

MXXXXX
SYYWWL
XXXXXX

Pin 1 Indicator located in this area.

Suggested Land Pattern
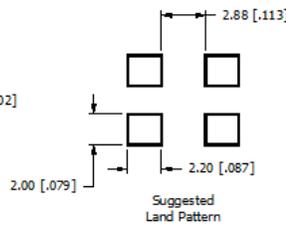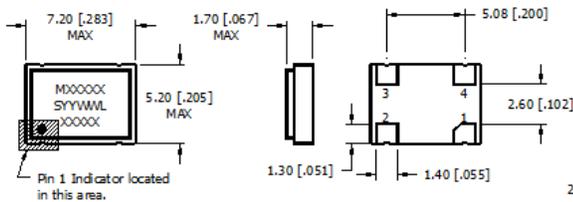
Pin Connections	
Pin 1	N/C, Tri-state or Stand by
Pin 2	Case Ground
Pin 3	Output
Pin 4	Supply Voltage

Notes :
1. Dimensions in brackets are in inches.
2. An External Bypass Capacitor is recommended.
3. Pads plating
Base or under conductor Ni thickness; 1.3 um to 8.8 um
Final plating; Au (99.9%) less than 0.5 um, 0.3 um typ

Tape & Reel Dimensions

PITCH
TAPE WIDTH
REEL DIA

Q1 Q2
Q3 Q4

DIRECTION OF FEED
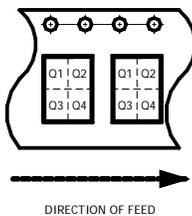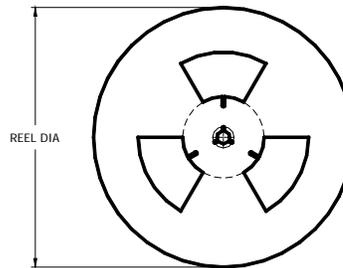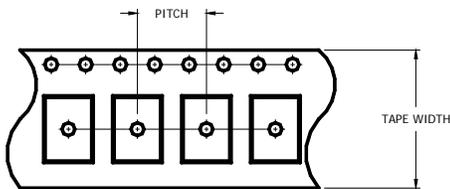
PITCH	8.00 [.315]
TAPE WIDTH	16.00 [.630]
REEL DIA	180[7 IN]
QTY PER REEL	1000
PIN 1 ORIENT.	Q1

NOTES: UNLESS OTHERWISE SPECIFIED
1. Applicable Standards / Specifications
ANSI Y14.5M, Dimensions and Tolerances
EIA-481-B, 8 mm through 200mm Embossed Carrier Taping and 8 mm and 12 mm
Punched Carrier Taping of Surface Mount Components for Automatic Handling.
2. Dimensions are in millimeters.
3. Tolerances are ±0.10 [.004] mm unless otherwise specified.
4. Do not scale drawing.

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RoHS Compliant Lead Free